

Appl. No. 09/800,645  
Amdt. dated April 13, 2004  
Reply to Office Action of February 9, 2004

### **REMARKS/ARGUMENTS**

In response to the Office Action mailed February 9, 2004, Applicants offer the following remarks to overcome the grounds for rejection.

Claims 1-6, 8-19, 22-33 and 77-79 are pending in this application. Claims 7, 20-21 and 34 have been cancelled. Claims 35-76 have been withdrawn from consideration. Dependent claims 77-79 have been added to recite more specific levels of chemical additive. Support can be found generally in the specification, including Table 1.

Claims 1-2, 4-5, 8-15, 18-19, 22-23, 25 and 27-33 stand rejected under 35 U.S.C. 102(e) as being anticipated by U.S. 6,344,109 to Gross. Gross discloses a method of softening cellulose pulp so that the pulp can be more easily fiberized. In addition, the resulting fibers are more limp and can therefore be converted into a denser airlaid pad for personal care products, such as diapers.

More specifically with respect to claims 1-2, 4-5, 22-23, 25 and 27, it is asserted that Gross discloses chemically treating pulp sheets with a 5% solution of a chemical softening agent. Upon drying the pulp sheet, the retention of the chemical is up to 90% (Example 4). However, this disclosure does not anticipate the rejected claims. Focusing on independent claims 1 and 22 for the moment, both of these claims recite that from about 10 to about 100 percent of the chemical additive is retained by the fibers when the treated pulp fibers are redispersed in water. Gross does not disclose that the treated fibers are redispersed in water and it is not inherent that the chemical softening agents disclosed by Gross would be retained by the treated fibers if they were dispersed in water. As such there is no anticipation of the rejected claims. The retention of 90 percent of the applied chemical mentioned in the rejection is merely the chemical retention after drying the treated pulp sheet and is not the same retention being claimed by Applicants. This reflects a fundamental difference in purpose between Applicants' invention and the pulp treatment disclosed by Gross. As stated above, Gross pertains to producing fluff pulp for absorbent cores in personal care products and does not teach anything about tissue making. Gross is seeking to enhance the formation and properties of fluff pulp, which is a dry process. In contrast, Applicants are seeking to treat pulp that is to be used for making paper or tissue sheets, which is a wet process. Therefore the chemical retention needs are very different. Therefore Gross does not anticipate either independent claim 1 or 22 and consequently all of the dependent claims are also not anticipated.

Appl. No. 09/800,645  
Amdt. dated April 13, 2004  
Reply to Office Action of February 9, 2004

With respect to the portion of the foregoing rejection specifically addressing dependent claims 8-13 and 33, these claims are not anticipated by Gross for the reasons stated above. In addition, the only chemicals disclosed by Gross are softening agents, which Gross defines as debonders, plasticizers or combinations. Gross does not disclose absorbency or strength agents, which clearly would not further Gross' objective of making the fibers more limp and less interactive. In this regard, claims 11-13 are patentable for the additional reason that they specify absorbency or strength agents.

With respect to the portion of the foregoing rejection specifically addressing claim 14, this claim is not anticipated by Gross for the same reasons stated above with respect to independent claim 1. Additionally, the rejection asserts that the sheet of Gross is rehydrated. This is not correct to the extent that the sheet being referenced is the chemically treated sheet. Instead, the sheet that is being rehydrated is simply an ordinary untreated dry pulp sheet. After the chemicals are applied to the pulp sheet, there is no disclosure or suggestion that it is rehydrated or redispersed in water.

With respect to the portion of the foregoing rejection specifically addressing claims 15 and 29-32, these claims are not anticipated by Gross for the same reasons stated above with respect to independent claims 1 and 22. Additionally, the rejection asserts that the disclosed range of chemical addition in Gross (4.2 - 4.5 weight percent) reads on Applicants' claimed range of 0.1 - 5.0 kg per metric ton, which is 0.01 - 0.50 weight percent. On its face, the chemical addition amount of 4.2 - 4.5 weight percent taught by Gross does not fall within the specific range of 0.01 - 0.50 weight percent taught by Applicants, which is approximately a factor of ten lower than the amounts taught by Gross. While most of Applicants' claims are open-ended with respect to the amount of chemical and therefore overlap the high add-on amounts taught by Gross, amended claim 32 recites an amount of chemical additive in the range of from about 0.1 to about 5 kilograms per metric ton. Therefore claim 32 is patentable for this additional reason.

With respect to the portion of the foregoing rejection specifically addressing claim 18, this claim is not anticipated by Gross for the same reasons stated above with respect to independent claim 1.

With respect to the portion of the foregoing rejection specifically addressing claims 19 and 28, these claims are not anticipated by Gross for the same reasons stated above with respect to independent claims 1 and 22. In addition, it is asserted that Gross discloses paper products at col. 1, lines 17-54). However, Applicants find no disclosure or suggestion in the cited text that the teachings of Gross apply to paper products. As previously mentioned, the teachings of Gross are limited to methods for treating pulp fibers to improve their performance as a fluff pulp. The

Appl. No. 09/800,645  
Amdt. dated April 13, 2004  
Reply to Office Action of February 9, 2004

resulting fluff pulp is used for making absorbent cores in personal care products, such as diapers, feminine pads and the like. Therefore claims 19 and 28 are not anticipated by the teachings of Gross for this additional reason.

Claims 3, 6, 16-17, 24 and 26 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Gross. More specifically with regard to claims 3, 6, 24 and 26, it is asserted that it would have been obvious from the teachings of Gross to provide an additive z-direction gradient within Applicants' claimed web since Gross teaches spraying the chemical additive onto the pulp sheet. However, the presence of a concentration gradient would be inconsistent with the objectives of Gross because that would mean that the resulting pulp fibers are not all treated the same. As such, those fibers within the low end of the concentration gradient would not exhibit the same desirable properties as those within the high end of the concentration gradient. In this regard, it must be noted that spraying the chemical debonder onto the surface of the pulp sheet as disclosed by Gross does not inherently produce a gradient. In the process of Gross, the amount of spray would be expected to be sufficient to completely saturate the pulp sheet in order to obtain the desired benefit. In fact, Gross teaches saturation of the pulp sheet at col. 4, lines 17-23. Given the objectives of Gross, it would not be obvious to form a gradient as claimed by Applicants.

With regard to claims 16-17, it is asserted that it would be obvious that the consistency of the dried treated pulp sheet of Gross would be within the claimed range of 65-100 percent. However, these claims are believed to be patentable for the same reasons set forth regarding the patentability of independent claim 1.


Therefore it is believed that this application is now in condition for allowance and such action is earnestly solicited.

Please charge any prosecutorial fees which are due to Kimberly-Clark Worldwide, Inc. deposit account number 11-0875.

The undersigned may be reached at: (920) 721-3616.

Respectfully submitted,

T. M. RUNGE ET AL.

By:   
Gregory E. Croft  
Registration No.: 27,542  
Attorney for Applicant(s)